CLAIMS:

1. A method of activating auto-antigen-specific T cells in an auto-immune disease patient, comprising the steps of:

removing antigen presenting cells (APCs) from an auto-immune disease patient;

transferring into the APCs a gene which encodes all or a portion of an auto-antigen to which the patient's antigen-specific T cells respond; and

reintroducing the APCs into the patient, whereby auto-antigen-specific T cells are activated.

2. The method of claim 1 wherein the gene which encodes all or a portion of auto-antigen further comprises a signal sequence and a transmembrane and cytoplasmic tail sufficient for endosomal processing.

3. The method of claim 1 further comprising the step of:

administering a product which is detrimental to activated T cell proliferation or survival to the patient.

4. The method of claim 3 wherein the product is CTLA4Ig, a fusion protein which binds to and blocks costimulatory B7 molecules on APC cells.

5. The method of claim 3 wherein the product is a cell which expresses and secretes CTLA4Ig.

6. The method of claim 3 wherein the product is Fas ligand.

7. The method of claim 6 wherein the Fas ligand is administered by administration of APC cells which express Fas ligand.

8. The method of claim 6 wherein the APC cells which express Fas ligand also express A truncated form of FADD which protects cells producing the truncated form of FADD from the apoptotic effects of Fas ligand.

9. The method of claim 3 wherein the product is an antibody specific for Fas.

10. The method of claim 9 wherein the antibody specific for Fas is a monoclonal antibody.

11. The method of claim 9 wherein the antibody specific for Fas is a single chain Fv (ScFv) antibody.

12. The method of claim 11 wherein the antibody is administered by administration of APC cells which express the single chain Fv antibody.

13. The method of claim 8 wherein the APC cells which express Fas ligand and a truncated form of FADD are the same cells which express auto-antigen.

14. The method of claim 5 wherein the APC cells which express CTLA4Ig are the same cells which express auto-antigen.

15. The method of claim 7 wherein the APC cells which express Fas ligand are the same cells which express auto-antigen.

16. The method of claim 1 wherein the gene is transferred with a virus.

17. The method of claim 16 wherein the virus is attenuated.

18. The method of claim 16 wherein the virus is a vaccinia virus.

19. The method of claim 16 wherein the virus is a Moloney Leukemia Virus.

20. The method of claim 16 wherein said virus further encodes a product which is detrimental to activated T cell proliferation or survival.

21. The method of claim 20 wherein the product is Fas ligand.

22. The method of claim 20 wherein the product is a single chain Fv which blocks costimulatory B7 molecules.

23. The method of claim 21 wherein the virus further encodes a truncated form of FADD sufficient to protect a cell expressing it from the apoptotic effects of Fas ligand.

24. Antigen presenting cells of an auto-immune disease patient which are transduced or transfected to express a first segment of DNA encoding all or a portion of auto-antigen to which the patient's antigen-specific T cells respond, wherein the cells comprise a second segment of DNA encoding a signal peptide 5' to said first segment and a third segment of DNA encoding a transmembrane and cytoplasmic tail 3' to said first segment, whereby the encoded all or a portion of auto-antigen is processed by endosomes.

25. The antigen presenting cells of claim 24 which are transduced or transfected to express a protein which is detrimental to activated T cell survival or proliferation.

26. The antigen presenting cells of claim 25 wherein the detrimental protein is Fas ligand.

27. The antigen presenting cells of claim 26 which have been transduced to

express a truncated form of FADD sufficient to protect a cell expressing it from the anti-apoptotic effect of Fas ligand.

28. The antigen presenting cells of claim 25 wherein the detrimental protein is a ScFv which blocks costimulatory B7 molecules.

29. A virus which infects human APCs and which comprises a first segment which encodes all or a portion comprising an epitope of an auto-antigen to which auto-immune disease patient's antigen-specific T cells respond.

30. The virus of claim 29 which is a vaccinia virus.

31. The virus of claim 29 which is a Moloney leukemia virus.

32. The virus of claim 29 further comprising a second segment which encodes a signal peptide 5' to said first segment and a third segment encoding a transmembrane and cytoplasmic tail 3' to said first segment, whereby the encoded all or a portion of auto-antigen is processed by endosomes.

33. The virus of claim 32 further comprising a fourth segment which encodes a product detrimental to proliferation or survival of activated T cells.

34. The virus of claim 33 wherein the product is Fas ligand.

35. The virus of claim 33 wherein the product is a ScFv which blocks costimulatory B7 molecules.

36. The virus of claim 34 further comprising a fifth segment which encodes a portion of FADD which is sufficient to protect a cell expressing Fas ligand from apoptosis.

37. The virus of claim 29 which is attenuated.

38. The method of claim 1 wherein the auto-antigen is extracellular domain of α-subunit of acetylcholine receptor and the auto-immune disease is myasthenia gravis.

39. The antigen presenting cells of claim 24 wherein the auto-antigen is extracellular domain of α-subunit of acetylcholine receptor and the auto-immune disease is myasthenia gravis.

40. The virus of claim 29 wherein the auto-antigen is extracellular domain of α-subunit of acetylcholine receptor and the auto-immune disease is myasthenia gravis.